

Kłodzko

Topic Question

How can I evaluate the cost of our energy?

Possible powers:

Solar

Wind

Hydro

About Kłodzko

Kłodzko is a city in Poland containing 28,249 thousand people. Kłodzko has many spas and mountain attractions such a Hiking. Kłodzko's temperature is rather cool and foggy. Tourism is famous in Kłodzko.

It has 56.498 million PLN available. It requires 97111587.3 KWh and each power plant should give 11 Megawatts.



Possible Powers

Solar – It costs between 234 and 268 billion PLN per power plant and each of them produces 10 MW. The cost of the power per hour is 0.50 to 0.74 PLN. solar has a lifetime of 30 years but solar needs lots of sun, Silicon and a lot of open space. Solar is good because it produces very little CO₂ but some bad points are that it is very expensive to install compared to the power generated. It ruins the landscape of the city and will not work during the night.



A solar panel field.

Wind – It costs about 20 to 70 million PLN for one small turbine. It produces 1.8 MW per small turbines. A wind turbine can last for at least 20 years and the only resource it needs is strong wind. The only pollution it creates is when it is being built. Disadvantages are that it is noisy and it is not very pretty in the landscape.



A wind power field

Hydro – It costs about 100 million PLN per installation and each of them, produce 1600 MW but the power it generates costs about 5000 PLN KW per hour. It has a life time average of 40 years. It is good because there is no waste product used, only water get out of it but to make it work, it needs a lot of water. Some problems are that it needs a lot of space and it is very hard to find a place big enough. It is also very ugly.



A hydro power station.

Conclusion

After looking at all these different type of power generation systems I have concluded that none of them would be the best to be use at the city of Kłodzko because it is a city that has tourism for the mountains and spas but if there is a big field of solar panels or of wind turbines it doesn't make the city nice and tourism will slowly go down and less people will come there. But I have still chose one power generation.

It will not be **Hydro power** because it's construction price is to expansive for the small town of Kłodzko. It is also not a good idea because there isn't enough water to make it work and if there would, it would still make the beautiful city ugly because of a huge machine standing in a river.

It will also not be **solar power** because Kłodzko's temperature is too low to have very effective solar panels. The price for solar panels are also too high for Kłodzko's budget. Solar panels could've make more tourists come to see how the city became more environmentally friendly.

So the only one left is **wind power**, but why wind? Because wind is the only one that can fit with Kłodzko's available money. Wind can also produce enough energy it just needs more than one turbine and it is good for the same reason as for solar some people might want to see Kłodzko's wind turbines.

To conclude, if I had to choose a power generation system for Kłodzko, it would be wind.